

Amendments to the Claims:

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) Automatic sample collector (4) for chronological deposition of liquids having

~~a collection container (3) or a plurality of collection containers (3) arranged in series, each which are~~ connected to a supply line (2) through a liquid inlet (6),

~~a supply line (2) between the liquid inlets (6) of adjacent collection containers (3) with a~~ supply liquid barrier (4) located in the supply line after each liquid inlet that is gas-permeable in dry condition and becomes permeable for to liquids after contact with the liquid and after a defined pressure difference thereover is exceeded and on the basis of wetting resistances, and

~~an integrated apparatus that prevents the additional inflow to the collection container (3) through the liquid inlet (6) after the associated collection container (3) has been filled.~~

a second gas-permeable liquid barrier on the basis of wetting resistances being integrated into the collection container for preventing the inflow to the collection container through the liquid inlet after the collection container has been filled, wherein the collapse of said second gas-permeable liquid barrier requires a greater pressure difference thereover than the collapse of the supply liquid barrier.

2. (Currently Amended) Automatic sample collector (4) in accordance with Claim 1, characterized in that wherein

~~the apparatus that prevents the inflow to the collection container (3) through the liquid inlet (6) after the collection container (3) has been filled~~

~~is developed as gas permeable liquid barrier (5) and that the collapse of said liquid barrier (5) requires a greater pressure difference than the collapse of the liquid barrier (4), and~~

the gas-permeable liquid barrier (5) is connected directly to the atmosphere or is integrated into a gas discharge (7).

3. (Currently Amended) Automatic sample collector (4) in accordance with Claim 1, characterized in that wherein

~~each collection container (3) gas discharge~~ is connected to the supply line (2) ~~by the liquid inlet (6) and an additional downstream gas discharge (7) in the direction of flow which is closed to the outside, and the supply liquid barrier (4) is arranged between the liquid inlet (6) and the gas discharge (7) of the collection container (3).~~

4. (Currently Amended) Automatic sample collector (4) in accordance with claim 1, characterized in that wherein the collection container (3) is connected to a gas discharge (7) that is not connected to the supply line (2) but rather in another way to the atmosphere or another larger closed space.

5. (Currently Amended) Automatic sample collector (4) according to claim 1, characterized in that the supply line (2) and/or wherein the collection containers (3) are ~~integrated in a solid matter body.~~ can be detached from the supply line.

6. (Currently Amended) Automatic sample collector (4) in accordance with claim 1, characterized in that it is ~~comprised exclusively of autoclavable materials.~~ wherein a delivery apparatus in form of a pump, suction apparatus or a valve is integrated in the supply line, and wherein the supply line comprises a pressure sensor, and a controller is configured to control the delivery apparatus or the valve in order to interrupt the liquid flow by switching off the pump or the valve as a result

of the change in pressure on the collapse of the gas-permeable liquid barrier, and in order to resume the flow.

7. (Currently Amended) Automatic sample collector (1) in accordance with ~~at least one of the claims 1 to 6~~ claim 1, characterized in that the collection containers (3) can be detached from the supply line (2).

8. (Currently Amended) Automatic sample collector (1) in accordance with ~~at least one of the claims 1 to 7~~ claim 1, characterized in that a delivery apparatus (8) in form of a pump or suction apparatus is integrated in the supply line (2).

9. (Currently Amended) Automatic sample collector (1) in accordance with ~~at least one of the claims 1 to 8~~ claim 1, characterized in that a valve (9) is integrated in the supply line (2).

10. (Currently Amended) Automatic sample collector (1) in accordance with ~~at least one of the claims 1 to 9~~ claim 1, characterized in that the supply line (2) comprises a pressure sensor (10).

11. (Currently Amended) Automatic sample collector (1) in accordance with ~~at least one of the claims 8 to 10~~ claim 8, characterized in that a control is arranged for the delivery apparatus (8) or the valve (9).

12. (Currently Amended) Automatic sample collector (1) in accordance with ~~at least one of the claims 1 to 11~~ claim 1, characterized in that its wherein gas-filled cavities of the sample collector contain a protective gas ~~such as nitrogen, argon or the like.~~

13. (Currently Amended) Automatic sample collector (1) in accordance with ~~at least one of the claims 1 to 12~~ claim 1, characterized in that a cooling apparatus, ~~preferably a~~

~~_____ Peltier cooling apparatus,~~ for the collection containers is integrated in the sample collector.

14. (Currently Amended) Automatic sample collector (1) in accordance with ~~at least one of the claims 1 or 13~~ claim 1, characterized in that an apparatus that prevents the flow in the liquid inlet (6) after the filling the collection container (3) is developed as cryostat which maintains the temperature of the liquid in the supply line (2) above the freezing point and the temperature in the collection containers (3) below the freezing point of the liquid to be collected.

15. (Currently Amended) Method ~~for the removal of one or a plurality of~~ extracting a sample[[s]] of a liquid from a flow of liquid, comprising where
guiding the liquid is guided in a supply line (2) of a sample collector (1) to a gas-permeable liquid barrier on the basis of wetting resistances and which becomes permeable to liquids after contact with the liquid and after a defined pressure difference thereover is exceeded and guiding the liquid via a liquid inlet (6) that branches off from the supply line (2) upstream of the gas-permeable liquid barrier (4) and runs into a collection container (3),
then filling said liquid is then filled into the collection container (3) through the liquid inlet (6),
then interrupting the feed-in of the liquid through the liquid inlet by a second gas permeable liquid barrier on the basis of wetting resistances, wherein collapsing the second gas-permeable liquid barrier requires a greater pressure difference thereover than collapsing the supply liquid barrier,
the second gas-permeable liquid barrier being integrated into the collection container (6) is interrupted, whereupon
a pressure in the collection container increases,
the liquid barrier (4) is permeated after a defined pressure difference thereupon is exceeded and
the liquid continues to flow through the supply line (2).

16. (Currently Amended) Method in accordance with claim 15, comprising
~~characterized in that~~
measuring the pressure difference between the liquid in the supply line (2) and a
reference pressure ~~is measured and~~
using
the increase of pressure in the supply line (2) after filling a sample
container, (3) or
the decrease of said pressure after collapse of the liquid barrier (4)
~~is used~~ as a signal to interrupt the feed-in of the liquid in the supply line (2)
with the help of a valve or (9), a controllable pump ~~or the like~~.

17. (Currently Amended) Method in accordance with claim 16, further
comprising ~~characterized in that~~ after interruption, automatically or manually resuming
the feed-in of liquid ~~is resumed automatically or manually~~ at a defined time by the
controlling a valve (9) or a delivery apparatus (8).

18. (Currently Amended) Method ~~Use of an automatic sample collector~~ in
accordance with ~~at least one of the claim 15s 1 to 14~~ and a method in accordance with
~~one of the claims 15 to 17~~ claim 15 wherein removal of a plurality of samples is a for the
chronological deposit of liquid samples from a flow of liquid without using movable parts
and without an external energy source.

19. (Currently Amended) Method ~~Use of an automatic sample collector (1)~~ in
accordance with ~~at least one of the claims 15 1 to 14~~ and a method in accordance with
~~one of the claims 15 to 17~~ wherein removal of a plurality of samples is a for the
chronological deposit of liquid fractions under water or in a protective gas atmosphere.

20. (Currently Amended) Method Use of an automatic sample collector (1) in accordance with claim ~~15~~¹⁴ and the method in accordance with claim 15 for the further comprising chronologically freezing of liquid samples.

21. (Currently Amended) Method Use of an automatic sample collector (1) in accordance with ~~at least one of the claims 18 to 20~~ claim 15 wherein removal of a sample is to deposit liquid fractions from a chromatography column, an electrophoresis apparatus, a reaction container, a culture container, a fermenter, a body of water, the ground of a body of water, the ground, a vegetable, or animal or human tissue or organ ~~or the like.~~

22. (Canceled)

23. (Canceled)

24. (New) Automatic sample collector for chronological deposition of liquids having a plurality of collection containers arranged in series, each connected to a supply line through a liquid inlet,

a supply liquid barrier on the basis of wetting resistances that is gas-permeable in dry condition and becomes permeable to liquids after contact with the liquid and after a defined pressure difference thereover is exceeded located in the supply line after each liquid inlet, and

a cooling apparatus for stopping a liquid flow, which prevents any additional inflow to the collection container through the associated liquid inlet after the collection container has been filled.

25. (New) Automatic sample collector in accordance with claim 24, wherein the cooling apparatus is a cryostat which maintains the temperature of the liquid in the supply line above the freezing point and the temperature in the collection container below the freezing point of the liquid to be collected.

26. (New) Automatic sample collector in accordance with claim 24, wherein a delivery apparatus in form of a pump, suction apparatus, or valve is integrated in the supply line, and wherein the supply line further comprises a pressure sensor, and wherein a controller is configured to control the delivery apparatus or the valve in order to interrupt the liquid flow by switching off the pump or the valve as a result of the change in pressure on the collapse of the gas-permeable liquid barrier, and in order to resume the flow.
27. (New) Method for the extraction of a sample from a flow of liquid, comprising guiding the liquid in a supply line of a sample collector to a gas permeable liquid barrier, which functions on the basis of wetting resistances and which becomes permeable to liquids after contact with the liquid and after a defined pressure difference thereover is exceeded and guiding the liquid via a liquid inlet that branches off from the supply line upstream of the gas-permeable liquid barrier into a collection container, then filling said liquid into the collection container through the liquid inlet, then interrupting the feed-in of the liquid through the liquid inlet through a device for stopping the liquid flow realized as a cooling apparatus, whereupon a pressure in the collection container increases, the liquid barrier is permeated after the exceed of a defined pressure difference thereupon and the liquid continues to flow through the supply line.
28. (New) Method in accordance with claim 27, further comprising measuring the pressure difference between the liquid in the supply line and a reference pressure and using the increase of pressure in the supply line after filling a sample container or the decrease of said pressure after collapse of the liquid barrier as a

signal to interrupt the feed-in of the liquid in the supply line with the help of a valve, or a controllable pump.